

1969

NARRATIVE REPORT
BENSON WETLAND MANAGEMENT DISTRICT
BENSON, MINNESOTA
CALENDAR YEAR, 1969

PERMANENT PERSONNEL

James J. Hubert, Project Leader, GS-12
Jack C. Wamble, Assistant Wetland Manager, GS-9
John T. Hatchinson, Biological Technician, GS-5
Roger H. Nelson, Maintenance man, WG-6
Richard W. Motzke, Maintenance man, WG-5
Evenne T. Mikkelsen, Clerk-Typist, GS-3, Part Time

1-1-69/12-31-69
1-1-69/12-31-69
5-18-69/12-31-69
1-1-69/12-31-69
1-1-69/4-18-69
1-1-69/12-31-69

TEMPORARY PERSONNEL

Daniel J. Orr, Laborer, WG-1
Thomas H. Tucker, Laborer, WG-1
John Schliep, Laborer, WG-3

6-2-69/8-29-69
6-16-69/10-17-69
5-5-69/11-29-69

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ANNUAL NARRATIVE REPORT
BENSON WETLAND MANAGEMENT DISTRICT
JANUARY - DECEMBER, 1969

I. GENERAL

A. Description of the Area

The Benson Wetland Management District with an office located in Benson, Minnesota was established in October 1964 to serve an area of eleven counties of West-central and South-central Minnesota. Included in the District are the counties of Big Stone, Cottonwood, Jackson, Kandiyohi, Lac qui Parle, Pope, Stearns, Stevens, Swift, Traverse and Yellow Medicine. The map which follows reflects the extent and location of the Wetland District in relation to the state. Individual management units are pin-pointed on the current Federal Guide to Waterfowl Production Areas attached to the back cover of this report.

The District lies on the eastern margin of both the Great Plains and the duck factory region of the upper midwest. The topography varies from rolling grassland to flat agricultural type land. The transition zone between plains and forest is locally evident. Signs of past glaciation are found throughout this region.

B. Status of the Acquisition Program

1. Fee Title Program

There has not been any significant policy changes in the acquisition program during this reporting period. The fee title program is still proceeding under the extended period as provided by the Wetlands Program Extension Bill of December 1967. June 30, 1976, will mark the end of this extended period. Goal acreage for the district remains at 52,037 acres. However, at the next meeting of the Minnesota Land Exchange Commission approval will be obtained, hopefully, to increase this goal to 59,000 acres. The 59,000 acreage figure was the original goal prior to the shifting of 7,000 acres to the Fergus Falls Wetland District in 1968. The goal of 364 management units in the eleven county Benson District still appears to be a realistic figure.

Table I, "Fee Title Acquisition Status", reflects trends of the fee title program from 1967 through 1969. A correlation of acquisition can easily be made between these three years. The option date of the purchase agreement was used as the breaking point for preparing Table I.

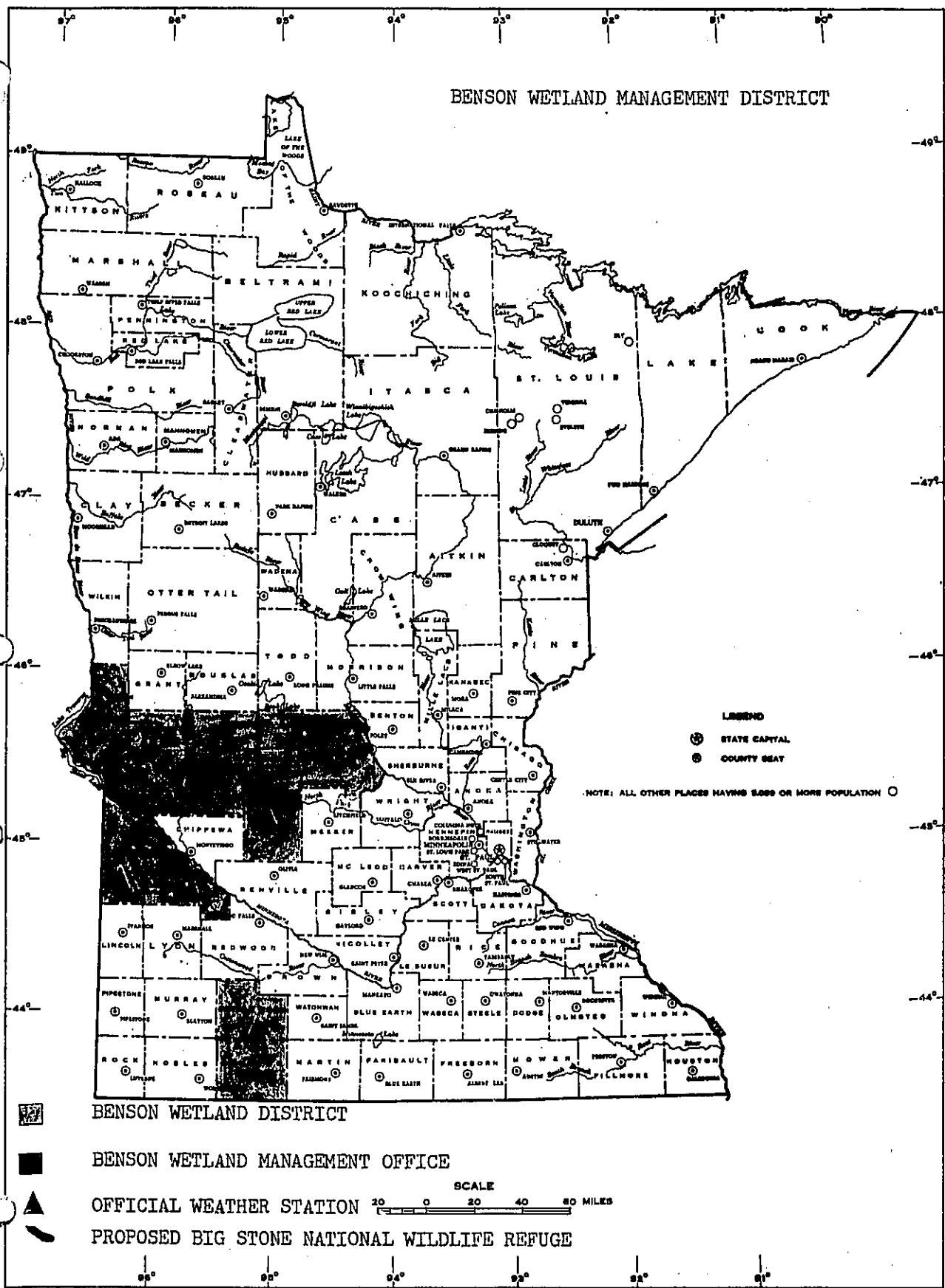


TABLE I
FEE TITLE ACQUISITION STATUS

County	1967		1968		1969	
	No. Mgt.:	Acres	No. Mgt.:	Acres	No. Mgt.:	Acres
Big Stone	46	6,600.15	53	6,677.15	54	7,344.42
Cottonwood	5	638.45	6	798.45	6	838.45
Jackson	10	1,352.17	10	1,352.17	10	1,352.17
Kandiyohi	33	5,223.86	38	5,823.37	42	6,505.39
Lac qui Parle	9	1,231.23	12	1,371.23	13	2,009.77
Pope	35	5,672.42	42	6,091.87	50	7,194.26
Stearns	12	1,966.69	13	2,044.69	20	2,581.41
Stevens	29	3,599.33	37	4,091.03	46	5,016.87
Swift	17	3,020.80	21	4,338.06	24	4,742.46
Traverse	7	1,669.62	7	1,669.62	7	1,669.62
Yellow Medicine	2	70.00	2	70.00	2	70.00
TOTALS	205	31,044.72	241	34,327.64	274	39,324.82

A slight increase in the number of tracts acquired from 46 in 1968 to 54 in 1969 was noted. Also, Table I indicates a substantial increase in the number of acres acquired in 1969 as compared to 1968. The Wetland Office acquired 273 acres per month in 1968, while 416 acres per month were acquired in 1969, respectively. The 1969 increase in tracts and acres purchased can be contributed to the acquisition office staff being at full complement and the optioning of several large acreage tracts.

Table I reflects a slight decrease in the number of new management units created in 1969 as compared to 1968. However, this decrease was predicted. It is evident that the creation of new units will continue to decrease as more time is required for roundouts in the future and the potential for new units becomes more limited.

During December 1969, the Benson Wetland Office was relieved of the temporary assignment for handling acquisition activities in three South Dakota Counties. This responsibility has been shifted to the Aberdeen Wetland Office. Also, the Regional Office is presently contemplating taking over acquisition in Cottonwood and Jackson Counties. Upon being relieved of these additional responsibilities the Benson Wetland Office will have more time for acquisition in the primary counties.

2. Easement Program

Trends of the easement program are reflected below in Table II, "Easement Acquisition Status". This table correlates progress of the program from 1967 through 1969.

TABLE II		EASEMENT ACQUISITION STATUS					
County	1967		1968		1969		1967
	No.	Acres	No.	Acres	No.	Acres	Total
Big Stone	99	13,773.43	108	15,572.63	109	4,349.00	15,641.83
Cottonwood	No easements being taken						
Jackson	No easements being taken						
Kandiyohi	82	9,507.62	85	10,205.27	85	3,033.00	10,205.27
L.Q.P.	2	240.00	2	240.00	2	141.00	240.00
Pope	116	19,290.98	118	20,118.13	120	5,366.00	20,338.13
Stearns	5	876.32	5	876.32	6	292.00	995.26
Stevens	10	890.99	15	1,392.64	14	435.00	1,426.64
Swift	11	1,271.52	13	1,311.52	14	399.00	1,341.52
Traverse	19	3,021.38	21	3,101.04	21	995.00	3,101.04
Yellow Med.	-	-	1	80.00	1	17.00	80.00
TOTALS	344	48,872.24	368	52,837.55	372	15,027.00	53,369.69

Activity in the easement program continues to fade. In 1968, 24 easements were secured while only 4 easements were taken in 1969. The conspicuous decrease in easements acquired in 1969 supports the present prediction that the easement program is subsiding in Minnesota. The lack of public acceptance and emphasis on draining in Minnesota appear to be the major culprits to the program.

The lack of public acceptance is primarily based on dissatisfaction with the size of payments offered for easements. The public feels that payments are too small. Predetermined land values used by the Bureau are badly in need of revision according to Acquisition Office personnel, in order to bring them more in line with rising land values for this area. Also small easement acreage parcels characteristic to Minnesota create smaller payments which are not inviting to landowners. In the Dakotas, landowners are more receptive to easement offers because payments are larger. This results from larger acreages involved in individual easements.

C. Weather Conditions

As we welcomed the new year the severe effects of winter were not yet to end. Sporadic snowstorms and blizzards continued to occur. Blizzard conditions evolved on January 23rd and 24th as a result of four inches of new snow and 30-35 mph. winds. Prolonged periods of high winds persisted throughout January causing extensive drifting through the district. Moderate temperatures were the order of the day throughout January and February, however, high winds in January tended to bring the wind chill factor into play. March brought up

TABLE III

1969 WEATHER DATA

Precipitation

Month	: Willmar	: Morris	: Benson	: Canby	: Windom	: Average
January	: 3.67"	: 2.17"	: 2.72"	: 2.27"	: 1.93"	: 2.55"
February	: 1.39	: 1.02	: 1.62	: 2.59	: 1.62	: 1.65
March	: .85	: .68	: .65	: .82	: 1.44	: .89
April	: 3.36	: 2.97	: 2.86	: 1.58	: 1.37	: 2.43
May	: 1.14	: 4.43	: 5.52	: 2.12	: 4.10	: 3.46
June	: 2.65	: 2.03	: 2.63	: 2.79	: 6.09	: 3.24
July	: 3.94	: 3.52	: 3.73	: 8.41	: 3.27	: 4.57
August	: 2.02	: .21	: .76	: 2.68	: 3.01	: 1.74
September	: 1.85	: 2.81	: 3.36	: 1.36	: .77	: 2.03
October	: 2.18	: 2.83	: 1.71	: 2.51	: 2.92	: 2.43
November	: .72	: .85	: .89	: 1.07	: .37	: .78
December	: 1.79	: 1.95	: 2.10	: 1.67	: 1.41	: 1.78

ANNUAL TOTAL 25.56" : 25.47" : 28.55" : 29.87" : 28.30" : 27.55"

ANNUAL NORM* 24.47" : 22.58" : 26.79" : 26.05" : 29.49" : 27.04"

*Annual norms for Willmar and Morris are based on period of 1931-1960.
Annual norms for Benson, Canby & Windom are based on period of 1966-1969.

Temperature

Month	: Willmar	: Morris	: Benson	: Canby	: Windom
	: Max : Min	: Max : Min	: Max : Min	: Max : Min	: Max : Min
January	: 33 : -20	: 32 : -25	: 33 : -21	: * : *	: 35 : -17
February	: 37 : -18	: 36 : -20	: 38 : -20	: 41 : -17	: 38 : -13
March	: 44 : -11	: 42 : -14	: 45 : -12	: 47 : -8	: 50 : -8
April	: 72 : 28	: 71 : 13	: 73 : 20	: 77 : 26	: 77 : 25
May	: 97 : 33	: 97 : 33	: 98 : 33	: 96 : 30	: 94 : 32
June	: 83 : 36	: 82 : 36	: 85 : 37	: 91 : 34	: 90 : 34
July	: 93 : 45	: 93 : 44	: 94 : 44	: 98 : 43	: 96 : 47
August	: 92 : 50	: 93 : 45	: 95 : 51	: 95 : 51	: 91 : 51
September	: 86 : 40	: 90 : 37	: 90 : 37	: 92 : 36	: 81 : 36
October	: 80 : 19	: 79 : 19	: 80 : 18	: 80 : 16	: 83 : 17
November	: 65 : 4	: 61 : 6	: 65 : 3	: 68 : 6	: 68 : 8
December	: 49 : -8	: 52 : -11	: 50 : -13	: 57 : -9	: 54 : -9
EXTREMES	: 97 : -20	: 97 : -25	: 98 : -21	: 98 : *	: 96 : -17

*Data not available

Last Killing Frost of Spring - 4/29/69
First Killing Frost of Fall - 10/8/69

the end of winter with rising temperatures and declining snowfall. The lack of precipitation in March lessened the threat of severe spring floods. The average total snow accumulation for the district for the winter of 1968-1969 was 74.52 inches. The western portion of the district received greater amounts with records set at some locations.

With the approach of spring in April the snow began melting very rapidly. By the last week of April all evidence of the snow pack was gone. The spring thaw brought flooding but not as severe as that experienced further down stream. Climatic conditions were very unstable through May and June with several occurrences of thunderstorms, hail, rain and tornado watches. A cloud burst on May 15th dumped excessive amounts of precipitation throughout the district, however Chokio set the record with 7-8 inches received. Water volume from this storm nearly equalled the spring runoff. Cottonwood and Jackson Counties also experienced a severe storm on June 24th and 25th, when they received 2.5 inches of rain. Temperatures during the spring season ranged from average in March to above average in May and below normal for June. Maximum temperatures for the year occurred during the month of May.

The summer season was uneventful with the exception of declining precipitation and mild temperatures. One heavy rain in the Counties of Cottonwood and Jackson caused flash flooding. The Kilen Unit water levels rose 3 $\frac{1}{2}$ feet above spring flood levels after a 6.75 inch rain on June 29th. Precipitation was near average for July, but began declining drastically during August.

The fall season for the most part was dry and mild. An eight week drought was broken at the close of the 3rd week of September by a three inch rain in Benson and lesser amounts throughout the district. The first snowfall of the approaching winter occurred on October 12th with more snow falling at the end of that month. With the exception of two short cold snaps, mild weather prevailed over the fall period.

Winter approached slowly, but by mid November there was no question of its power. Moisture was light during November. The first lasting snow occurred on November 17th and 18th when Benson received four inches. By the end of December additional snowfall brought the total accumulation to around 20 inches for the district. The immediate potential for drifting snow is great since the snow has remained loose and fluffy. Freeze-up for the permanent marshes occurred on November 12th. Temperatures continued mild through the end of the year. Wind has been more sporadic and less forceful than for this period in 1968.

D. History of Past Use

The region is primarily agricultural with corn and beans as prevailing crops. Nearly all land regardless of capability has

been tilled at one time. All types of erosion are evident as a result.

The terrific demand for farmland in the 1940's and 1950's caused many thousands of wetlands to be destroyed in the name of conservation. Greater emphasis on true conservation in recent years has resulted in at least a beginning to better land use.

The wetland management units are beginning to contribute to the area economy. Although the degree of economic relation may be small, the grazing units and small farmland tracts will aid the surrounding communities.

E. Habitat Conditions

1. Water

With a deep snow pack and saturated soils the potential was high for excessive water and flooding in the spring of 1969. Flooding did occur but not as severely as expected earlier due to the limited precipitation received in March. Spring flooding washed out many roads and bridges throughout the district. Four ditch plugs on our WPAs were washed out leaving the associated wetlands dry for the remainder of 1969. One large earthen dam on a waterfowl easement in Pope County broke and released the energy of 520 plus acre feet of water.



Spring flooding near North Redwood Falls, Minn.
69, 24, 4-17. JJH

Above average water levels on wetlands continued through June. Heavy rains in May created additional flooding because the ground was already too saturated to hold more water. Excessive spring moisture provided an excellent opportunity to evaluate the success of past ditch plugging used to restore wetlands. Flooding and excessive moisture was devastating for the farmers causing delays in crop planting, and in many cases completely eliminating small grain seedings. However, flooded croplands in early spring were very attractive to waterfowl. The water and abundant food within was a great drawing card for thousands of migrating waterfowl.

An eight week droughty period during July, August and September forced most all type III wetland to go dry. However, water levels on larger permanent marshes remained adequate as freeze-up occurred. Average amounts of rain and snow during the last three months of the year should place moisture at optimum levels for next spring.

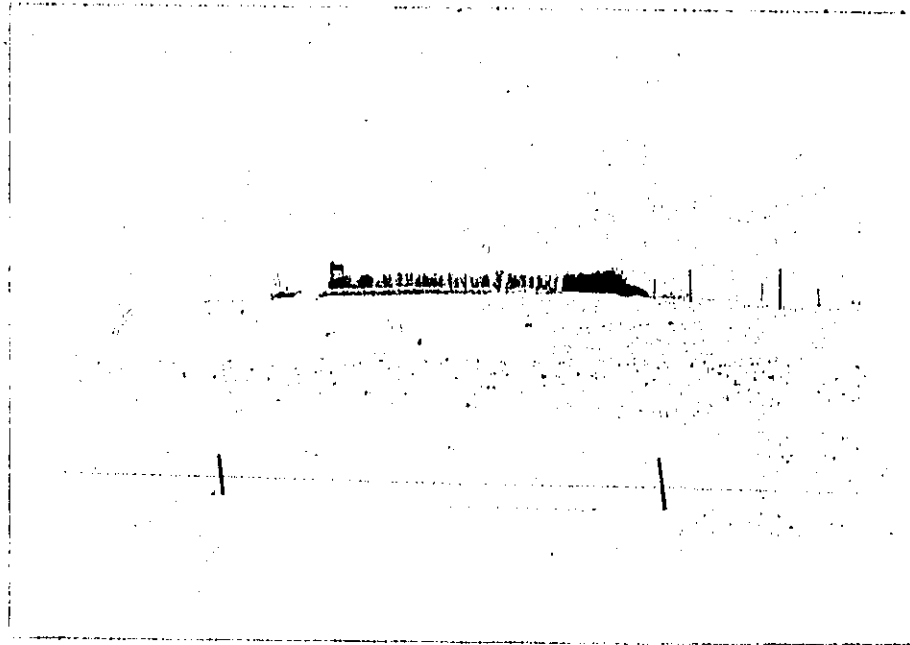
The abundance of water during the first half of the year stimulated a vigorous growth of both upland and aquatic plants. Many soils saturated for the first time in several years brought forth lush stands of smartweed. The absence of wild rice on some areas where it was present in 1968 might be contributed to high water. High water levels also created openings in marshes commonly choked with vegetation, thus drawing waterfowl use. The abundance of water caused a greater dispersion of waterfowl over the district as well as increased production for the year.

2. Food and Cover

Food and cover were essentially unavailable to resident wildlife as the year began. Heavy snow accumulations and high persistent winds had filled road and drainage ditches brim full by January 1, 1969. Marshes and small shrub patches were also filled by January 1st. The only cover remaining for upland game by mid winter was that cover associated with building sites and most of it was poor. The Cottonwood-Jackson County area was not as severely effected as throughout the northern portion of the district.

Heavy snow caused some deer depredation and starvation problems. Several reports were received that herding deer were devouring many bushels of corn and small grain from corn cribs and cattle feed bunkers. Deer resorted to that type of feeding because deep snow made other food sources unavailable. Local conservationists initiated an emergency deer feeding operation during the 2nd week of February because of public concern over deer starvation. At one

site six miles west of Benson a herd of 200⁺ deer went through 250-300 bushels of ear corn in a three week period. Although members of our staff assisted in the deer feeding operation on occasions the necessity of the operation was questionable. Observations by our staff did not reveal any noticeable distress in deer. Also, adequate browse was still available within range of yarding areas. Hard crusted snow during late winter stimulated predation by dogs. Deer were unable to escape from dogs since they would break through the snow while the dogs could run on top.



After blizzards little wildlife cover left:
Stevens County

69, 5, 2-2, JJH

Some wildlife food was carried over into 1969 because the wet fall of 1968 limited harvesting, fall plowing and burning. Spring flooding of croplands and grasslands made this food readily available to waterfowl, but somewhat inaccessible to upland game. Many acres of vigorous stands of smartweed appeared in 1969 on areas that were dry and void of this plant in the past. Wild rice failed to reoccur on some areas in 1969, possibly due to high water. Spring small grain plantings were reduced over the district because of excessive moisture. Also, the year of 1969 brought forth a bountiful supply of thistles, an excellent provider of escape cover for upland game birds.

Vegetative growth for the year suffered its ups and downs, but in general wildlife food and cover derived from it was adequate. Farm crops were planted late. Cool June temperatures slowed down the growth of all vegetation, while the eight week droughty period began showing its effects on plants. Late harvesting of most farm crops offered additional food and cover to wildlife for a longer period. Also, late harvesting and the onset of winter put a damper on some fall plowing and burning in 1969.

As winter approached food and cover were sufficient. However, early winter snows did a good job in shrouding portions of these essentials to wildlife survival. Although wildlife is not yet in distress, the potential for severe effects before the winter ends is great.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl - (Anseriformes)

Waterfowl moved into the eleven county district in mid-March. The overall migration was less spectacular than may be usual. The extremely moist winter resulted in loafing ponds being available nearly anywhere and the birds were spread out widely.

TABLE IV		BREEDING PAIR SUMMARY, BLOCK COUNTS						
Unit	: Total : Water : Water :			Pairs (ducks-coot)				
	: Study : Basin : Surface:							
	: Acres :	Acres :	Acres* :	1967	1968	1969	Average**	
Evenson	: 140 :	49 :	49 :	14-2 :	30-0 :	29-12 :	26.3-4.6	
Christenson	: 465 :	124 :	124 :	22-0 :	19-0 :	22-3 :	21.0-1.0	
Dismal	: 640 :	256 :	256 :	60-7 :	88-25 :	171-42 :	106.3-24.6	
Total	: 1245 :	430 :	430 :	96-9 :	137-25 :	222-57 :	151.6-30.3	
*Present year only				**1967 thru 1969			77 pps/sq. mi.	

77 pps/eq. mt.

Breeding conditions were excellent with very good spring runoff and rains. A rarity occurred when the block count areas all contained basin-full water. Total pairs of ducks were up very significantly over past years. Management practices including cover seeding and ditch plugging were also of great benefit to breeding waterfowl on the block count areas as well as district wide. Censusing of the block areas is done using the beat-out method.

TABLE V BREEDING PAIR SUMMARY, SPECIES COMPOSITION

Species	: Christ-:			: Total Pairs	Composition Percentage		
	: Evenson	: onson	: Dismal		: 1967	: 1968	: 1969
Mallard	: 1	: 4	: 18	: 23	: 22.9	: 8.0	: 10.3
Gadwall	: -	: -	: 10	: 10	: 1.0	: .7	: 4.5
Widgeon	: -	: -	: 1	: 1	: 4.1	: 0	: .4
Wood Duck	: -	: 2	: -	: 2	: 3.1	: 3.6	: .8
Blue-wing	: 21	: 15	: 96	: 132	: 62.5	: 57.6	: 59.4
Green-wing	: -	: -	: -	: -	: 0	: 1.4	: 0
Shoveller	: 2	: -	: 7	: 9	: 0	: 2.1	: 4.0
Pintail	: -	: -	: 10	: 10	: 1.0	: .7	: 4.5
Redhead	: -	: -	: 16	: 16	: 3.1	: 8.7	: 7.2
Canvasback	: -	: -	: 1	: 1	: 1.0	: 0	: .4
Lesser Scaup	: -	: -	: -	: -	: 0	: 0	: 0
Ruddy Duck	: 5	: -	: 12	: 17	: 0	: 15.3	: 7.6
Ring Neck	: -	: -	: 1	: 1	: 1.0	: 1.4	: .4
TOTAL	: 29	: 22	: 171	: 222			

A rather dramatic decrease in mallard pairs was noted but overall pairs of ducks increased very substantially. Coots continued to increase in breeding numbers to the extent of over 50% annually since 1967 when the census was initiated.

Duck broods began appearing in early June, somewhat later than the late May period of their appearance in 1968. The brood transects were censused for the third straight year. Each of the two transects was run twice as in past years. The transects are 42 miles and 53.5 miles in length.

TABLE VI BROOD SURVEY SUMMARY

	Broods (Transect #1 - #2 - total)*			Average
	1967	1968	1969	
Dabblers	: 49-11-60	: 20-31-51	: 27-23-50	: 32-22-54
Corrected Dabblers	: -	: 31-62-93	: 78-53-131	: -
Divers	: 2-1-3	: 0-2-2	: 3-9-12	: 2-4-6
Corrected Divers	: -	: 0-2-2	: 5-12-16	: -
Tot. Dab. & Divers	: 51-12-63	: 20-33-53	: 30-32-62	: 34-26-60
Corrected Total	: -	: 31-64-95	: 83-65-147	: -
Coots	: 52-16-68	: 0-3-3	: 98-48-146	: 50-22-72
Corrected Coots	: -	: 0-6-6	: 243-79-322	: -
Basin Acres	: 1323	: 1456	: 1456	: 1411
Water Acres**	: -	: 359	: 1081	: -

*Two counts each transect **Average for two counts

Production of dabblers, divers and coots was up substantially over the three year average. General marsh quality was high and remained good through the brood season. The effect of wetland drainage was again felt however as several marshes on the brood routes were ditched out. A total of 10 separate wetlands have been lost to drainage on the transect routes since the routes were established in 1967.

Fall migration was generally spread out through October and the first half of November. A conspicuous migration of geese occurred on October 11th and 12th ahead of a weather system. Several short term freeze-ups were noted in October with final marsh freeze-up coming on the last day of the duck season, November 12th. Whistling swans were evident in both spring and fall migrations.

2. Water and Marsh Birds - (Gaviiformes, Ciconiiformes, Colymbiformes, Gruiformes and Pelicaniformes)

Great blue herons and american egrets are common in the district. A colony now exists on our Stearns County Lovell Lake Unit. American bitterns, least bitterns, green herons and black-crowned night herons are all observed regularly. King and yellow rails are believed to inhabit the area but reports are unconfirmed.

Coots were very abundant as is evidenced in the breeding pair and brood summaries of the preceding tables. Competition for territorial rights between ducks and coots may be a limiting factor in waterfowl production. Pied-billed grebes are common nesters in the district. Loons migrate through the area but are seldom observed.

Double-crested cormorants are common visitors to many of open water marshes. White pelicans are common during migrations.

3. Shore birds, gulls and terns - (Charadriiformes)

Wilson's snipe are common throughout the warm months. Sandpipers, yellow-legs, plovers, godwit and phalarope are found throughout the area. Woodcock are known residents in the eastern part of the district but their population is low.

The herring, franklins and ring-billed gulls are all common residents between spring and fall migrations. Forsters, common and black terns are noted frequently.

4. Doves - (Columbiformes)

Mourning doves are frequent visitors and residents of federal wetlands. Banding proved to be very successful this year and is covered more completely in Section V.

B. Upland Game Birds - (Galliformes)

Pheasant numbers were drastically reduced by the record winter of 1968-69. Cover conditions continued to deteriorate on private lands. Many federal wetland units are situated as an oasis of cover among thousands of acres of privately owned agricultural land. The prime pheasant range in Minnesota was once the Stevens and Swift County area. It now appears as though south central Minnesota takes the honor. Our random sex-ratio count during the 1968-69 winter season involved 612 pheasants. A ratio of 1.05 males to 1.0 female was found. Influencing this count greatly was the total of 350 noted on the Kilen Unit and near the Sangl Unit in Jackson County. The 1966-67 ratio was 1:1.83 and in 1967-68 it was 1:1.19.

Ruffed grouse are common to only a few units in the eastern fringe of the district. Hungarian partridge are occasionally noted in the district. Sixteen huns were flushed on the Spanier Unit in Stearns County on December 22.

C. Other Birds (Falconiformes, Strigiformes, Passeriformes)

Marsh, red-tailed, red-shouldered, goshawk, rough-legged and sparrow hawks are all at least occasional visitors to the district and to our units. Osprey and eagles are observed occasionally. Great-horned owls are common residents while barred, screech, snow and barn owls make a few visits.

Belted kingfishers and crows are common warm season residents with some of the latter remaining year around. Many of the perching birds are found on the wetland units and apparently thrive on the protective cover offered by them.

D. Big Game Animals

White-tailed deer are common throughout the district. Most wetland management units provide very good protective cover for deer. Many units provide natural feed in addition to food plots and other planted cover. We estimate that around 1200 deer frequent the units.

E. Fur Animals, Predators, Rodents and other Mammals

Improved marsh conditions over 1968 apparently boosted the muskrat population. Houses and feeding piles were more abundant. Census methods will hopefully be developed this year for a more reliable survey of these animals. Mink remain common as they somewhat follow the rat population.

Beaver are common throughout the district but are located on only about two units. Red fox numbers have been drastically reduced.

The uncontrolled "snowmobile harvest" of fox last winter plus high fur prices apparently cut them down severely. Though snowmobile driving, chasing, harrassing or running down of any wildlife is now illegal the population remains very low according to trappers and hunters.

Cottontail rabbits, red squirrel and gray squirrel continue to be common.

F. Rare, Endangered and Status Undetermined Species

There are no threatened species known to exist in the district.

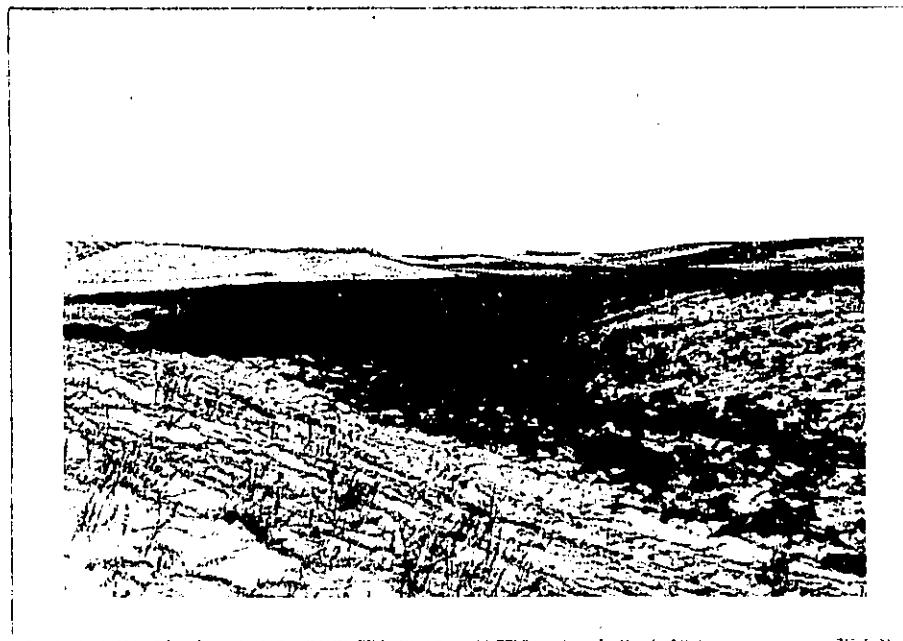
G. Fish

With the exception of a few streams, the wetland units contain no desirable fisheries. During high waters carp and other rough fish often enter some of our marshes but are eliminated through suffocation at least by mid-winter.

III. W.P.A. DEVELOPMENT AND MAINTENANCE

A. Physical Development

Ditch plugging continued to be a major physical developmental activity. This relatively inexpensive project results in the restoration or reclamation of once drained marshlands. Occasionally the opportunity is present to actually create a new wetland.



Ditch plugging on the Bakalyar Unit, Cottonwood County.
69, 69, 11-21, JCW



Results of Ditch Plugging on the Bredburg Unit, Pope Co.
69, 46, 5-9, JCW

A total of 50 ditch plugs were constructed and 6 tile lines destroyed through a contract for a dozer and operator this fall. The average cost per plug or tile was approximately \$15.50. Also handled by the contract dozer were two parking lot approaches, 13 building sites leveled, several dump burials and 3 ditch plug repairs. Each of the work sites were hand seeded to alfalfa and rye following project completion.

TABLE VII MAJOR PHYSICAL PROJECTS

County	Unit	Item and Amount	Remarks
Big Stone	Karsky	New Fence, 430 rods*	F, 29.0 md
	Nelson	Fence Removal	F, 1.5 md
	Wagner	Bldg. Site Cleanup*	F, 10.5 md
	Blinkman	Ditch Plug, 1	C
	Stegner	Ditch Plug, 3	C
	Wagner	Ditch Plug, 2	C
Cottonwood	Bakalyar	New Fence, 768 rods*	F, 29.2 md
	Eckhardt	New Fence, 160 rods	F, 14.5 md
	Bakalyar	Ditch Plug, 4	C
Jackson	Kilen	Tile Line Destroyed, 1	C
	Sangl	Ditch Plug, 6	C
	Stern	Ditch Plug, 3	C
	Stern	Tile Line Destroyed, 1	C

County	Unit	Item and Amount	Remarks
Kandiyohi	Allen	New Fence, 140 rods*	F, 20.5 md
	Aasen	Fence Removal	F, 13.2 md
	Olson Lake	Fence Removal	F, 5.0 md
	Sonstegard	Bldg. Site Cleanup	F, .5 md
	Evenson	Construct Spillway	F, 1.7 md
Lac qui Parle	Farrell	Fence Removal	F, 3.5 md
	Larson	Bldg. Site Cleanup	F, 3.0 md
	Overby	Fence Repair	F, 8.0 md
	Colbert	Ditch Plug, 2	C
Pope	Hagen	New Fence, 264 rods*	F, 28.2 md
	Greiner	New Fence, 200 rods*	F, 10.0 md
	Thone	New Fence, 72 rods*	F, 3.5 md
	Staack	Construct Parking Lot	F, 3.5 md
	Berg	Ditch Plug, 1	C
	Hagen	Ditch Plug, 3	C
	Hagen	Tile Line Destroyed, 1	C
	Jordan	Ditch Plug, 1	C
	Jordan	Tile Line Destroyed	C
	Jorgenson	Ditch Plug, 2	C
	Klevenberg	Ditch Plug, 4	C
	Mattson	Ditch Plug, 4	C
	McIver	Ditch Plug, 3	C
	Moen	Ditch Plug, 2	C
	Thone	Tile Line Destroyed, 1	C
	Staack	Repair Ditch Plug, 2	C
	Staack	Parking Lot Approach	C
Stearns	Costello	New Fence, 70 Rods*	F, 15.0 md
	Grosier	Bldg. Site Cleanup	F, 1.0 md
Stevens	Golden	Fence Removal	F, .7 md
	Van Horn	Fence Removal	F, 3.0 md
	Sherstad		
	Slough	Bldg. Site Cleanup*	F, 13.5 md
	Schultz	Bldg. Site Cleanup*	F, 12.0 md
	Edwards	Repair Ditch Plug	C
	Edwards	Repair Culvert	C
	Miller	Ditch Plug, 1	C
	Miller	Tile Line Destroyed	C
	Miller	Dike Repair	C
	Schultz	Ditch Plug, 1	C
	Solvie	New Fence, 500 rods	F, 29.0 md
Swift	Compton	New Fence, 381 rods	F, 29.0 md
	Loen	New Fence, 200 rods	F, 21.0 md
	Swenson	Ditch Plug, 2	C

*Including removal of old fence

C= Contract

F=Force Account md= 8 hour man days

Fencing to control trespass cattle and machinery continued to be an important project. A total of 9.9 miles of new fencing was constructed on eleven units. Each project included a multitude of old useless fencing constituting a safety hazard and was removed. On the average one and a half miles of this old difficult to remove fencing was taken out for each mile of new construction. Parking lots including cowbenders were first constructed in 1969. A total of three lots are now in place.



Parking lot construction, cowbender being erected by.
Roger Nelson and John Schliep, Solvie Unit, Stevens Co.
69, 77, 11-25, JJH

Building site cleanup was very time consuming. Junk piles were consolidated and scattered refuse gathered to prepare for dozer cleanup. Buildings that were of no value or couldn't be sold were destroyed and the remains buried.

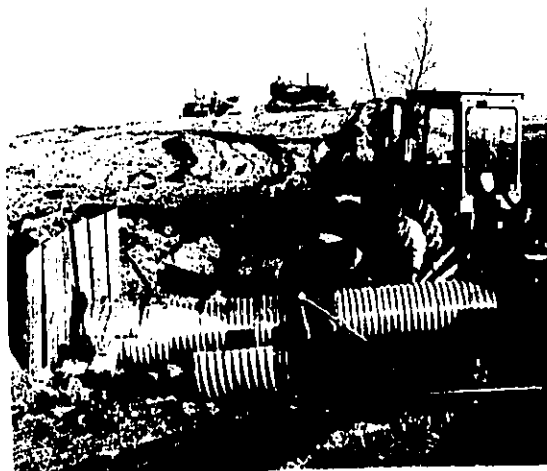


Air pollution! (B)

Washing and "burying"
better ?

Building Site Cleanup on Schultz Tract, Stevens County
69, 13, 5-8, JJH

The Willmar Sportsmans Club financed a \$1500 water control structure on the Weber Unit. The structure contains draw-down facilities and was engineered by the Soil Conservation Service.



Installation of Corrugated Metal Pipe in Water Control Structure, Weber Unit, Kandiyohi County.
69, 73, 12-1, JJH

Additional food plots were measured and marked. Tract boundaries were also measured and marked on tracts not having formal surveys. Tree snags offering predator perches were cut from 14 units. Many additional hours were spent straightening sign posts, replacing signs, repairing fencing, vehicle maintenance and shop cleanup.

Boundary posting was completed on 62 new tracts using the new sign. All established units were reposted on roadsides only using the new WPA sign. The Benson District now contains 222 management units totaling 31,271 acres. This compares to 193 units and 26,922 acres in 1968. As of February, 1969 we had 603 miles of external boundaries.

B. Plantings Including Soil and Moisture

1. Trees and Shrubs

Shrub plantings were completed on the Stevens County Edwards Unit and the Jackson County Kilen Unit. These block plantings consisted mainly of low growing shrubs and evergreens. Extensive plantings are now being planned in cooperation with the Minnesota Conservation Department to place block plantings on 12 federal units in 1971. Now planned for 1970 plantings are 6 of our units.

2. Grasslands

A total of 1074 acres of retired cropland was seeded down to permanent cover. Cooperative farming agreements covered most of the acreage while 69 acres were seeded using our own Nisbet Drill.

TABLE VIII

GRASSLAND SEEDING SUMMARY

Management Unit	County	Acres Seeded	Seeding Mixture*	Rate per Acre	Method	Date Seeded
Bentson Lake	Big Stone	43	A	10 lbs.	Contract	Spring
Moulton Lake	Big Stone	6	A	10 lbs.	Contract	Spring
Jacobson	Big Stone	86	A	10 lbs.	Contract	Spring
Karsky	Big Stone	12	A	10 lbs.	Contract	Spring
Larson Slough	Big Stone	80	A	10 lbs.	Contract	Spring
Nelson	Big Stone	12	A	10 lbs.	Contract	Spring
Nelson	Big Stone	12	B	10 lbs.	F.A.**	5/20/69
Swenson	Big Stone	62	A	10 lbs.	Contract	Spring
Wagner	Big Stone	32	A	10 lbs.	Contract	Spring
Wagner	Big Stone	20	B	10 lbs.	F.A.**	5/20/69
Pankonin	Cottonwood	2	A	10 lbs.	Contract	Spring
Kilen	Jackson	125	A	10 lbs.	Contract	Spring
Bjur	Kandiyohi	20	A	10 lbs.	Contract	Spring
Fischer	Kandiyohi	59	A	10 lbs.	Contract	Spring

Management Unit	County	Acres Seeded	Seeding Mixture*	Rate per Acre	Method	Date Seeded
Sonstegard	Kandiyohi	12	B	10 lbs.	F.A.**	4/25/69
Sperry Lake	Kandiyohi	10	A	10 lbs.	Contract	Spring
Colbert	Lac qui Parle	58	A	10 lbs.	Contract	Spring
Taylor	Lac qui Parle	40	A	10 lbs.	Contract	Spring
Jorgenson	Pope	23	A	10 lbs.	Contract	Spring
Mattson	Pope	36	A	10 lbs.	Contract	Spring
Moen	Pope	39	A	10 lbs.	Contract	Spring
Gamradt	Stearns	12	A	10 lbs.	Contract	Spring
Grote	Stevens	6	A	10 lbs.	Contract	Spring
Johnson	Stevens	8	A	10 lbs.	Contract	Spring
Lee	Stevens	34	A	10 lbs.	Contract	Spring
Miller	Stevens	25	A	10 lbs.	Contract	Spring
Miller	Stevens	25	B	10 lbs.	F.A.**	5/14/69
Peterson	Stevens	6	A	10 lbs.	Contract	Spring
Schultz	Stevens	54	A	10 lbs.	Contract	Spring
Telkamp	Stevens	8	A	10 lbs.	Contract	Spring
Lindahl	Swift	24	A	10 lbs.	Contract	Spring
Svor	Swift	9	A	10 lbs.	Contract	Spring
Swenson	Swift	50	A	10 lbs.	Contract	Spring
Westhausen	Swift	13	A	10 lbs.	Contract	Spring
Busack	Yellow Med.	11	A	10 lbs.	Contract	Spring

TOTAL ACRES

1074

**F.A. = Force Account

*A= Alfalfa 7 lb., Switch 1 lb.,
Sand drop 1 lb., Green
Needle 1 lb.

B=Big Bluestem 1 lb., Little Blue-
Stem 1 lb., Switchgrass 1 lb.,
Indian Grass 1 lb., Blue Grama
1 lb., Buffalograss 1 lb., Sand
Drop seed 1 lb., Green Needlegrass
1 lb., Canada Wildrye 1 lb.,
Alfalfa 1 lb.

The usual arrangement when cooperators were involved was for the operator to supply all the small grain seed and five pounds of alfalfa seed per acre in addition to doing the field work. We supplied 5 pounds of a seed mixture that would go through a grain drill grass seed attachment and yet get a few native grasses established. The operator did all the seeding and received full share of the small grain crop in return. A summary of seeding activities may be found in Table VIII.

C. Cultivated Crops

Wildlife foodplots are established where there is a need and suitable cropland and tenants are available. Rotations involving corn, small grain and alfalfa on three separate ten acre fields were used on 33 units in 1969. Single fields of corn involving 6 acres were planted on 19 smaller units for a total of 52 units containing food plots. These food plots were sharecropped resulting in the wildlife share of one third of the corn left standing through the winter. Resident wildlife make extremely good use of these plots and returning waterfowl in the spring harvest most of what is left.

To avoid the problem of the operator leaving the poorest corn for our share we use the alternate row harvest system. The operator harvests eight rows and leaves four rows alternately across the field. This has worked out very nicely. Snow seems to spread itself well throughout the whole plot also leaving the ears exposed for wildlife use.

Food plots are placed only where suitable level cropland exists and other cover types are well represented.

D. Collections and Receipts

1. Building Disposal

Surplus real property was disposed of through bid invitation in February. Four building sites were involved including eight structures. Only seven bids were received but receipts totaled \$1,148.50. Unfortunately this money is not available for needed development in the district but must be deposited in the general treasury of the United States.

A total of 128 structures have been sold by this office during the past five years for total receipts of \$14,106.19.

E. Control of Vegetation

Weed control was accomplished on 74 units. Total acreage mowed, sprayed or swathed was 2,194 acres. Canada thistle, sow thistle and leafy spurge were the most serious pests. Control activities are delayed as far into July as possible and still get good results so as to keep the disturbance to nesting birds to a minimum.

Though of no benefit to wildlife weed control is necessary for public relations and to conform with Minnesota State Law. Large acreages acquired rapidly and retired to grassland just as rapidly have allowed plant succession to the ultimate. The chemical application portion of weed control in the Benson District is summarized on NR-12.

IV. RESOURCE MANAGEMENTA. Grazing

Policy and philosophy concerning grazing has changed very little in four years. Grazing by permit has been allowed when not in conflict with basic wildlife management objectives, and size and condition of the unit warrant such use. Retiring pastures, fencing and cropland grass seeding are factors which must be considered prior to permitting grazing. The goal calls for very moderate grazing from the standpoint of wildlife habitat enhancement. A minimum rate of eight acres of grass per adult head for a maximum five month season has remained the criterium for determining AUMs. The price of \$2.00 per AUM still represents fees charged in the area.

TABLE IX 1969 GRAZING PROGRAM				
Management Unit & County	Acres Grass	Total AUM's	Date of Use	Revenue Collected*
Bakalyar (2), Cottonwood	72	45	5/1-9/30/69	\$90.00
Elder (19), Pope	162	100	5/1-9/30/69	200.00
Ewen (3), Jackson	144	90	5/1-9/30/69	180.00
Freese (4), Kandiyohi	120	70	5/1-9/30/69	140.00
Gjerdengen (5), Pope	45	25	5/1-9/30/69	50.00
Lindahl (15), Swift	80	40	5/1-9/30/69	80.00
Randall (5), Kandiyohi	224	95	5/1-9/30/69	190.00
Rice (6), Swift	55	30	5/1-9/30/69	60.00
Sonstegard (20), Kandiyohi	74	45	5/1-9/30/69	90.00
Welsh (4), Swift	260	110	5/1-9/30/69	220.00
1969 TOTALS (10**)	<u>1236</u>	<u>650.0</u>		<u>\$1,300.00</u>
1968 Totals (8**)	878	518.25		\$1,036.50
1967 Totals (12**)	<u>1199</u>	<u>703.0</u>		<u>\$1,405.00</u>
1966 Totals (7**)	<u>804</u>	<u>428.0</u>		<u>\$ 856.00</u>

*Total @\$2/AUM

**Total Permittees

Table IX above reveals the magnitude of our 1969 grazing program as well as totals for 1966-1968. Grazing permits were granted on ten management units for the year, while only eight units were grazed in 1968. The Ewen Unit which was grazed the previous year remained idle in 1969 due to lack of interest. The Lindahl Unit was opened for grazing for the first time but only for one year. New interest in grazing caused the reopening of the Rice and Randall Units during this reporting period.

B. Haying

A haying program has never been initiated in this WPA District. The destruction of habitat and setting of precedence are the main factors against the program. Native and tame hay lands are retired to allow maximum nesting and escape cover as well as native grass invasion. Some grasslands are developed into grazing units when practical to discourage monotypes or reduce cover extremes.

In 1969, haying was limited to use as a tool to control weeds. A few farmers were permitted to take hay in turn for clipping weeds. This was geared to the best control of weed infestations. Generally cooperators were difficult to find. Very few farmers could be interested because the quality of hay was poor when clipping was permitted. Clipping and baling of vegetation surrounding the nest cover width study plots were also accomplished in 1969. It was necessary to pay for having the bales removed because of their poor quality as hay.

C. Fur Harvest

Public interest in trapping appeared to have stabilized since the previous season. This activity remains mediocre and widely scattered over the district. Several trappers desire to use Federal Wetlands for trapping because it eliminates paying rent for trapping privileges. On the other hand, fox trappers do not prefer densely covered WPAs because the cover interferes with their trapping technique. Very little use of WPAs was experienced by professional full time trappers. Most trapping use was conducted by nearby farmers and youngsters on a part time basis to supplement income or as a hobby. The establishment of a trapping plan is not practical or warranted at this time.

Realistic data for analyzing the status of the resource is difficult to obtain. This is contributed to a limited number of trappers over a widely-scattered area and insufficient man-hours for conducting surveys. Once all leading trappers using Federal wetlands have been identified, the procurement of fur harvest data may be possible.

Based on trapping success of local trappers, mink and fox populations are down this season while muskrats have made a significant increase. Station personnel are inclined to accept these claims based on their general observations and investigations. The increased number of rat houses in 1969 tends to support this conclusion also. One local fur dealer predicts a total receipt this year of only one half as many pelts as the 8,500 purchased the previous year. The price of fox and mink pelts are down slightly, however muskrat pelts have doubled.



Trapper on Bakalyar Unit, Cottonwood County, Minn.
69, 64, 11-21, JCW

Limited beaver trapping was conducted on the Georges Unit in Pope County during March, 1969. One beaver was observed in a trap on that unit. Many trappers feel beaver trapping is not worth the effort.

D. Other Resources

Some interest still exists for maintaining bee apiaries on waterfowl production areas. Federal wetlands offer excellent yard sites with an abundant pollen supply and exclusion from disturbances. Special-use permits were issued to two bee keepers covering four yards. One bee keeper discontinued use of the Lovell Lake Unit in Stearns County during 1969. Active apiaries under permit in 1969 were located on the Paulson and Froland Units in Pope County, Wetherell Unit in Swift County and the Hodak Unit in Kandiyohi County. Requests were received for two additional sites but they were denied because of interference with banding activities and other biological studies. A charge of \$10.00 per apiary was set in 1968.

V. FIELD INVESTIGATIONS OR APPLIED RESEARCH

A. Wildlife Management Studies

One management study is now in progress, The Nest Cover Width Study. Two additional cooperative studies have been under

consideration for the past year and a half by the area biologist and The Northern Prairie Wildlife Research Center. However, as yet no steps have been taken to initiate action on these studies. The two proposed studies will involve waterfowl cover preference and a study to test the effects of reduced agricultural operations on waterfowl production.

1. Cooperative Nest Cover Width Study

In cooperation with several refuges and other wetland districts, this district continued the wildlife management study. The Area Biologist heads the project with responsibilities for supervision and research. Northern Prairie Wildlife Research Center is supplying research assistance. The objectives of this study are as follows:

Primary

- 1) To compare dummy nest survival rates in different cover block widths.
- 2) To compare natural nest densities in different cover block widths.
- 3) To compare natural nest survival rates in different cover block widths.

Secondary

- 4) In some samples, to compare the relative attractiveness of different cover types and cover densities.
- 5) To compare dummy nest and natural nest survival rates.
- 6) To determine the efficiency of the flushing device used and of the search after haying.

Dummy nest sampling was carried out in 1968 on the Stimmler Unit. In 1969 the natural nest phase was initiated. On June 10th the area surrounding the study blocks was disced to prohibit nesting. Although earlier discing would have been preferred, it was impossible due to high water and field moisture conditions. The study blocks were searched 50 per cent on June 17, July 2, and July 16. A two man, 16½ foot, flushing rig made of rope, chains and empty beer cans with stones inside was used. The vegetative cover on the blocks ranged from thin quackgrass and thistle to heavy quackgrass and miscellaneous forbs.

On August 25th all cover on the blocks was removed by a swather and baled. An additional search of the entire cover blocks was made on September 4. Only one natural nest was found on the study blocks during the study period, a blue-winged teal that appeared to be successful. The flushing rig used during the study seemed to be adequate for dragging the small study blocks.

The following difficulties were encountered during the study.

- 1) The late discing caused possible destruction of first nesting attempt outside the study blocks. The one nest found in the study blocks was thought to be a re-nesting attempt.
- 2) During the latter part of the study it was difficult to obtain cooperators to do the swathing and baling. Most farmers were in the midst of harvesting their own crops.
- 3) Unusually high water conditions in the spring of 1969 caused some deviation from scheduled techniques and possibly normal waterfowl activity.
- 4) After haying it is difficult to determine if nests have been successful or have been destroyed by predation or machinery.

B. Informal Biological Activities

1. Banding

A pre-season dove banding program was again carried out in 1969. The objective was to contribute to the Bureau's nationwide banding program and the 3,500 bird quota set for Minnesota. Pre-baiting was started on June 16 and traps were placed at sites on June 20. Twenty collapsible funnel type traps were used at four sites. The number of traps at each site varied with success, predation, etc.



Dove Banding by John Hutchinson on site where 278 of the total 736 doves were banded.

69, 55, 7-25, JGW

Actual trapping commenced on July 9 and continued until July 27, 19 days, when our supply of bands was exhausted. A total of 736 doves were banded, while 168 were retrapped. Sixty seven per cent of the birds banded were immatures. The most successful banding site was a cornfield that had been treated with Atrazine the previous year. A total of 278 doves were banded at this site. Setting trap clusters of three or four proved successful at all sites. Fifteen doves were lost to dog predation. In 1970 trapping should prove to be good as we have established good sites and trapping procedures.

2. Pothole Blasting

This proven developmental technique for increasing and improving habitat is being tested for effectiveness on Waterfowl Production Areas. The secondary objective is to establish demonstration sites for future reference and public relations purposes.

A total of 28 blasted potholes have been placed on Waterfowl Production Units in the Benson District. Ten were created in 1966 and an additional 18 were blasted in 1967. Limited funds have precluded pothole blasting in 1968 or in 1969. Many excellent sites exist for this type of development and it is hoped that these will be developed in the future.

Due to high water conditions, close evaluation of the potholes was difficult this year. Cattail was observed growing to the edge of some potholes where in previous years other types of vegetation, more beneficial to waterfowl, prevailed. The spoil created when the pothole was established was, for the most part, covered by high water, thus reducing loafing areas. In general the potholes were probably less attractive to waterfowl in 1969 because of numerous open water areas created by excessive moisture.

VI. EASEMENT ADMINISTRATION

Again, that awesome ogre "Lack of Funds" stepped into the picture. Limited funds prevented aerial inspection of easements this year. To partially remedy the situation, all staff members were instructed to check as many easements as possible from the road as they traveled to and from different tasks in the Benson District. No violations were noted or reported to the office, but many of the districts 368 easements went unchecked. Delayed agricultural harvests, abundant moisture and the early onset of winter conditions reduced the potential of easement violations for 1969. It is hoped that next year we can again utilize an aircraft for inspection.

Public acceptance of the easement program remains low. Land owners seem to be playing the waiting game. The possibility of a land bank program has added to their hesitation to lease their lands.

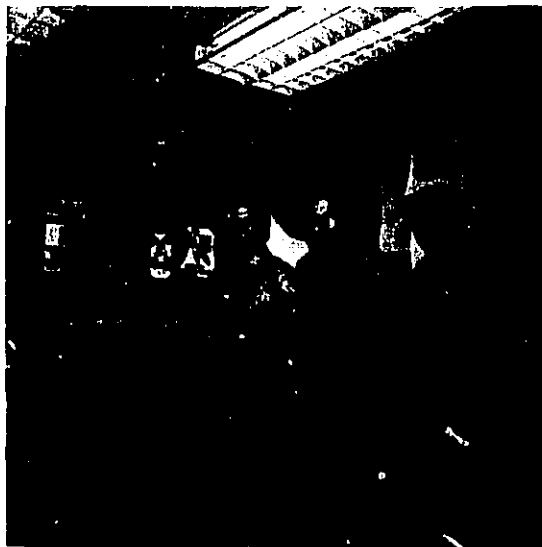
VII. PUBLIC RELATIONS

A. Recreation Uses

Recreational use totaled approximately the same as in 1968. Differences in reporting procedures and forms make a direct comparison difficult. Table X following this section reflects recreational use figures for each category. This table is not included in the Central Office copy of this report as per instruction on Regional Release II.

B. Wetland Management Office Visitors

Routine visitors included the Acquisition Office staff, Paul Wojahn, John Scharf and Jerry Larson of the MCD and the local ASCS manager. The station was inspected on May 5th and 6th by John Carlsen, on May 15th by Lewis Garlick and July 24th and 25th by Clair Rollings. John Langenbach visited on November 18th and Messrs. Carpenter, Monnie and Dybsetter were here on December 15th relative to the management of Big Stone Refuge.



Wetland Management Office Permanent Staff - L to R
Jim Hubert-Manager, Evonne Mikkelsen-Clerk, Roger
Nelson-Maintenanceman, Jack Womble-Ass't. Manager,
John Hutchinson-Biological Technician.

70, 1, 1-20, JJH

TABLE X
Bureau of Sport Fisheries and Wildlife
Division of Wildlife Refuges

29.

ANNUAL
~~MONTHLY~~ RECREATIONAL USE REPORT

Refuge name
Benson Wetland Management District
State
Minnesota

State
Code **23**
(1-2)

Congressional
District Code **07**
(3-4)

Refuge
Code **315**
(5-7)

Report Yr. Mo. Calendar
Period ☐ ☐ ☐ Year **1969**
(8-11)

(Card Columns) (12-13) (14-18) (19-25)			
ACTIVITY	Code	VISITS FOR THE MONTH	
		Total Number	Total Hours
Hunting: Big Game	01	2150	1300
Upland Game	02	100	800
Waterfowl	03	10500	21000
Other Migratory	04	150	300
Other	05	2100	2100
Bow	06	1500	3700
Fishing: Salt Water	07		
Warm Water	08		
Cold Water	09		
Environmental Education	10		
Wildlife Photography	11	2150	2150
Wildlife Observation	12	19500	19500
Conducted Programs	13		
Field Trials	14		
Wildlife Trails	15		
Wildlife Tours/Routes	16	150	900
Visitor Contact Stations	17		
Camping (wildlife related)	18	220	9025
Picnicking (wildlife related)	19	175	950
Wildlife Interpretive Center	20		
Off-Site Programs	21	330	53

(Card Columns) (12-13) (14-18) (19-25)			
ACTIVITY	Code	VISITS FOR THE MONTH	
		Total Number	Total Hours
On-Site Programs	22		
*Miscellaneous Wildlife	23	1775	1775
Swimming	24	50	50
Boating	25		
Water Skiing	26		
Camping	27		
Group Camping	28		
Picnicking	29		
Horseback Riding	30	25	25
Bicycling	31		
Winter Sports	32	1110	1210
Fruit, Nut and Vegetable Collecting	33		
*Miscellaneous Non-Wildlife	34	200	210
Peak Load Day	35	3500	
Actual Visits	36	30236	
Commercial Days Use		1300	
Fee Area Use	37		
Number of Fee Areas	38	(14-18)	
Fee Collections	39	\$	
Collection Costs	40	\$	

Form 3-123
(Revised July 1969)

*Use reverse side to indicate types of activities summarized under miscellaneous codes 23 and 34. MAKE NO OTHER ENTRIES ON FACE OF THIS FORM.

C. Participation

TABLE XI WETLAND MANAGEMENT PARTICIPATION

Date	Activity, Group and Location	Personnel
1-22	Met with Kiwanis Agr. Comm. re. Wildlife tour, Benson	Hubert
2-6	Met with Sportsmen re emergency deer feeding, Benson	Hubert & Womble
2-20	Presented wetland program to Sportsmen, Willmar	Hubert
2-22	Assisted in deer feeding on MCD Unit, Danvers	Hubert, Nelson & Womble
3-3	Met with Swift SCS re. co-op. agreements, Benson	Hubert
3-7	Met with Stevens SCS re. co-op. agreements, Morris	Hubert
3-11	Met with Pope SCS re. co-op. agreements, Benson	Hubert
3-11	Met with High School Staff re. Nat'l. Wlf. Week, Starbuck	Womble
3-12	Met with Yellow Med. SCS re. co-op. agreement, Clarkfield	Hubert
3-12	Met with L.Q.P. SCS re. co-op. agreement, Madison -	Hubert
3-13	Met with Kandiyohi SCS re. co-op. agreement, Willmar -	Hubert
3-14	Met with MOU re. tour of federal wetlands, Benson	Hubert & Womble
3-15	Assisted in deer feeding on MCD Unit, Danvers	Hubert, Nelson & Womble
3-17	Presented Nat'l. Wlf. Week Prog. Public School, DeGraff-	Womble
3-17	Presented Nat'l. Wlf. Week Prog. High School, Glenwood-	Womble
3-17	Presented Nat'l. Wlf. Week Prog. Elem. School, Glenwood-	Womble
3-17	Presented Nat'l. Wlf. Week Prog. to Cub Scouts, Benson-	Womble
3-17	Presented Nat'l. Wlf. Week Prog. to Lions, Benson -	Womble
3-17	Presented Nat'l. Wlf. Week Prog. to Boy Scouts, Benson-	Womble
3-18	Presented Nat'l. Wlf. Week Prog. Public School, Starbuck-	Womble
3-18	Met with Traverse SCS re. co-op. agreements, Wheaton -	Hubert
3-18	Assisted with Wildlife Contest by FFA, Starbuck -	Womble
3-18	Presented Wlf. Week Prog., Girl Scouts, Benson -	Womble
3-18	Presented Wlf. Week Prog., Sportsmen Club, Willmar -	Womble
3-19	Met with Fergus WMO staff re. mutual problems, Morris-	Hubert & Womble
3-20	Presented Wlf. Week Prog. to High School, Willmar -	Womble
3-20	Presented Wlf. Week Prog. (3) to JHS, Willmar -	Womble
3-20	Presented Wlf. Week Prog. to Community Group, Starbuck-	Womble
3-21	Presented Wlf. Week Prog. (2) Public Schools, New London-	Womble
3-21	Presented Wlf. Week Prog. to Elem. School, Sunburg -	Womble
3-21	Presented Wlf. Week Prog. to Public Schools, Murdock -	Womble
3-21	Met with Big Stone SCS re. co-op. agreement, Ortonville-	Hubert
3-24	Met with Stearns SCS re. co-op. agreement, St. Cloud -	Hubert
3-24	Presented Wlf. Week Program to JHS, Benson	Womble
3-25	Presented Wlf. Week Program to Kiwanis, Benson -	Womble
4-1/3	Participated in Management Workshop, Watertown -	Hubert & Womble
4-8	Presented Wetlands Program to Sportsmen, Holloway -	Hubert
4-19	Manned BSEW booth at Sport Show, Willmar	Hubert & Womble
4-22	Participated in district weed meeting, Glenwood	Hubert
4-28	Met with owner, ASCS, SCS re. Hawkinson Ease. Washout	Hubert
5-1	Met with Cott. and Jackson SCS re. co-op. Agree. Windom and Lakefield	Hubert
5-17	Presented Wetlands Program to MDU, Willmar	Hubert
6-16	Met with Boy Scouts re. project on WPA, Benson	Hubert
7-30	Presented Wetlands program to Sportsmen, Willmar	Womble

Date	Activity, Group and Location	Personnel
8-5	Conducted tour of Aasen WPA for Girl Scouts, Benson	Womble
8-6	Presented Wetland Prog. to Underpriv. Child, Sibley Pk.	Womble
8-11	Met with Kandiyohi Commissioner re. road ease. Kelly U.	Hubert
8-20	Attended Lake Florida & Pollution Meetings, Willmar	Hubert
9-8	Met with Big Stone SCS re. co-op. agreement, Ortonville-	Hubert
9-15	Presented Pollution Program to Coterie, Benson	Hubert
9-25	Participated in Management Meeting, Webster	Hubert & Womble
10-6	Met with Kiwanis Board re. financing of "donut", Benson	Hubert
10-11	Presented Wetlands prog. to SW Minn. Nature Group, Windom-	Hubert
11-7	Met with SCS to insp. water control struc. prop. Weber U.-	Hubert
11-10	Presented Job Corps program to Women's Club, Benson	Hutchinson
11-16	Presented Bertrand program at Baptist Church, Benson	Womble
11-17	Presented Bertrand Program to Lions, Benson	Womble
12-2	Presented Bertrand Program to Kiwanis, Benson	Womble
12-11	Attended Sportsmens Club Meet., Willmar	Womble

Jack Womble regularly attended the bi-weekly Lions meetings and participated in their community activities. Roger Nelson continued his leadership as scoutmaster of the Swift Falls Boy Scouts. Jim Hubert regularly attended monthly board meetings and weekly luncheons of Kiwanis and participated in his Church Council activities as secretary.

Routine contacts were made with district SCS and ASCS offices and all county assessors were contacted for delivery of the revenue checks. Realtors of the Acquisition Office were assisted by obtaining Certificates of Possession and Disclaimers and meeting with potential vendors relative to land use questions.

D. Hunting

Interest in hunting on WPAs continues to spread. The growing demand for the Federal Guide to Waterfowl Production Areas helps to promote public interest. More hunters are focusing their attention on Federal Wetlands because increasing numbers of private lands are bound by leases or posted against trespass.

Favorable water conditions influenced higher waterfowl production in 1969. Increased waterfowl numbers were dispersed over more wetlands and encouraged greater hunting pressure this season. Also, an assumption can be made that the closure of the pheasant season stimulated many hunters to concentrate their efforts on waterfowl. Competition for hunting space on the better quality wetlands was quite acute during the first two weekends of the season. For the first time in several years waterfowl were present through the entire season. As a result, scattered waterfowl hunting was noted over the district

through the close of the season on November 12th when freeze-up also occurred. An unusual mass migration of geese on October 11th and 12th created some additional hunting activity. Deer, rabbit and squirrel hunting on WPAs has remained consistent with interest shown in 1968.

TABLE XII

BAG CHECK SUMMARY

Benson Wetland Management District									
	1966	1967	1968	1969					
Hunters Checked	109	74	130	161					
Coot Checked	0	1	1	11					
Ducks Checked	136	121	76	159					
Avg. Ducks/Htr.	1.24	1.63	.58	.98					
Ducks Lost/Hunter	13/35	37/48	30/26	40/144					

Species	No.	%	No.	%	No.	%	No.	%
Mallard	45	33	24	20	17	22	34	21
Black	-	-	-	-	3	4	-	-
Gadwall	1	Tr.	1	Tr.	1	Tr.	1	Tr.
Baldpate	9	7	6	5	11	14	17	11
Pintail	7	5	1	Tr.	2	3	2	1
G.W. Teal	18	13	23	19	19	25	7	4
B.W. Teal	22	16	48	40	12	16	30	18
Shoveller	5	4	4	3	-	-	6	4
Wood Duck	5	4	11	9	6	8	18	11
Red Head	14	10	2	Tr.	1	Tr.	14	9
Ring Neck	5	4	-	-	2	3	10	6
Scaup	5	4	1	Tr.	1	Tr.	18	11
Canvasback	-	-	-	-	-	-	1	Tr.
Mergansers	-	-	-	-	1	Tr.	-	-
Bufflehead	-	-	-	-	-	-	1	Tr.

State wide, hunter's success increased over 1968. However, success data in Table XII, Bag Check Summary, is inconsistent with state statistics on this accord. This is explained by the fact that hunters were checked at various stages of their hunt in lieu of the completion of the hunt. Reduced crippling loss could be partially contributed to the ratio of open water to vegetative cover during a season of abundant water. The dominating duck species bagged by hunters in this district in 1969 were mallard and blue-winged teal.

E. Violations

All hunters included in the bag check summary were checked for legal compliance. Table XIII, Violation Summary lists three violation cases in which the defendants were processed through state courts. Robert L. DeGeest requested to pay fine by mail but delayed payment for three weeks. The presiding judge was in the process of issuing an arrest warrant when payment was finally received.

TABLE XIII

VIOLATION SUMMARY

Defendant	Charge	Officer	Action
Jerome A. Johnson	: Lending hunting license	: Womble	: \$25/4
Raymond Noyes	: Improperly plugged gun	: Womble	: \$15/0
Robert L. DeGeest	: Improperly plugged gun	: Womble	: \$50/0
Jeffrey J. Johnson	: Improperly plugged gun	: Womble	: Warning/Juv.
Joe S. Kotzenmacher	: Hunting w/fl. w/rifle	: Womble	: Warning/Juv.
	: No Firearm saf. cert.	:	:
Rodney J. Johnson	: Improperly plugged gun, no	: Womble	: Warning/Juv.
	: hunting license or stamp	:	:

Reports and seizures were made in the cases of three juveniles listed in Table XIII. Information and seized property was released to a state warden who initiated warnings and returned property to the defendants and their parents. Joe Kotzenmacher was directed to participate in the next Firearms Safety Course or further action would be necessary. At least twenty additional hunters, involving mostly juveniles, received warnings for game violations.

Prohibited use of snowmobiles on WPAs was again publicized before the onset of snow cover. Yet, evidence of snowmobile activity continued to be common on many WPAs this winter. Recently, a request was made for the Minnesota Conservation Department to issue a Commissioners Order closing Federal Waterfowl Production Areas to snow vehicle use. This order would give state officials the authority to prosecute violators on WPAs.

F. Safety

Safety meetings were conducted periodically. Safety literature from the Regional Office and several films provided topics for discussion. Greater effort is being made to increase staff participation by shifting responsibility and promoting discussions. Subjects covered in meetings included driving safety, falls, drinking, common heart disorders, personal health, control of bleeding, chain saw safety, policies and regulations covering accident reporting.

This stations safety record was severely scarred during 1969 by two accidents. John Schliep, a temporary laborer received a lumbo-sacral sprain while operating a power auger on June 24th. This accident involved three and one half days lost time. The other accident occurred on September 18th when Roger Nelson, maintenance foreman received multiple cuts of the hand and face from the explosion of an old blasting cap. The cap was in the ashes of an old shed which had just been burned. This accident caused two days off duty and high

medical expenses, and yet, he will be carrying some metal fragments in his body for years. These accidents have emphasized to all employees the need for further precautions and safety sense.

G. Revenue Sharing

Table XIV reviews the refuge revenue sharing payments and a comparison of amounts with past years. As expected payments increased in counties where acquisition has been active.

TABLE XIV PAYMENTS TO COUNTIES

County	1966	1967	1968	1969
Big Stone	\$2,905.95	\$3,477.93	\$4,480.66	\$4,494.69
Cottonwood	204.54	249.77	616.11	886.11
Jackson	807.30	1,023.73	1,547.17	1,547.17
Kandiyohi	2,040.73	3,147.17	3,430.94	3,928.62
Lac qui Parle	16.91	673.11	1,028.84	1,162.45
Pope	1,507.43	2,489.97	2,991.38	3,588.92
Stearns	694.73	963.03	1,240.02	1,240.02
Stevens	1,942.47	2,720.86	2,857.41	3,526.43
Swift	1,123.25	1,490.26	1,536.91	2,744.57
Traverse	988.05	1,193.48	1,264.73	1,264.73
Yellow Medicine	20.27	20.27	80.27	80.27
TOTAL	\$12,251.63	\$17,449.58	\$21,074.44	\$24,463.98

Payments were publicized this year by a news release to all county newspapers. Also, the Wetland Office Supervisor participated in deliverance of checks when possible. In general, public reaction has been favorable. It is interesting to note that the Bureau is paying 58¢ per acre as compared to the state's payment of 25¢ per acre on wildlife lands.

VIII. OTHER ITEMS

A. Items of Interest

A \$30 Incentive Award was shared by Hubert, Motzko and Nelson for their development of a portable wire winder. In July, Roger Nelson was promoted to WG-6 and Jim Hubert was promoted to GS-12 in September. The position of biological technician was established in May and filled by John T. Hutchinson, formerly on the Detroit Lakes Job Corps staff.

Duck stamp sales dropped for the third straight year at the Benson Post Office. The stamp was priced at \$3.00 for each of the years in the following table.

TABLE XV DUCK STAMP SALES - BENSON, MINN.

Year	Amount	Year	Amount
1963	283	: 1967	431
1964	293	: 1968	414
1965	330	: 1969	396
1966	420	:	

A wide range of news releases were issued. Included were the subjects of snowmobiles, surplus building sale, wildlife week, transfer of Hutchinson, dove banding, WPA brochure, new wetland sign, revenue sharing, water control structure financed by sportsmen and snowshoeing-snowmobiling. The periodic article on wildlife "Wing tips" was also written.

Jack Womble completed the CSC Course Supervision and Group Performance. A 1969 Public Service Award was presented to Jim Hubert in October.

Sections I, IV and portions of VII of this report were completed by Jack Womble and Sections II, III, VII and VIII were prepared by Jim Hubert. John Hutchinson prepared Sections V and VI and portions of all other sections. Evonne Mikkelsen gets the credit for arrangement and typing of the report.

B. Signature Page

36.

1-22-70
Date

James J. Hubert
James J. Hubert
Project Leader

1-26-70
Date

John O. Carlson

Signature (R.O. Approval)
ASST to Project Leader
Title

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Form NR
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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Summary - Eleven Counties State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./Tons	Unharvested Acres	Bu./Tons			
<u>Cropland Retirement</u> Small Grain/Logans Native Grass and/or Small Grain	1,017 65		0 0		0 0		1,017 69	1,017 - Alfalfa Cov. 69 - Native grass Cover	1,017 69
<u>Food Plot Rotation</u> Corn	192		0		96		288		288
Small Grain/Alfalfa	261		0		0		261	261 - Alf. Cover	261
Alfalfa	0		0		0		0	279 - Alf. Cover	279
<u>Food Plot</u> Corn	106		0		40		146		146
								Fallow Ag. Land.	
								7	7

No. of Permittees: Agricultural Operations 90 Haying Operations 0 Grazing Operations 10

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	163	650	\$1300.00	1,236
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0			2. Acreage Cultivated as Service Operation				69

DIRECTIONS FOR PREPARING FORM NR--8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Big Stone State Minnesota

Cultivated Crops Grown	Permittee's		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Share Harvested		Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	333		0		0		333	333-Alfalfa Cover	333
Native Grass and/or Small Grain	32		0		0		32	32-Native Grass Cover	32
<u>Feed Plot Rotation</u>									
Corn	54		0		27		81		81
Small Grain/Alfalfa	81		0		0		81	81-Alfalfa Cover	81
Alfalfa	0		0		0		0	81-Alfalfa Cover	81
<u>Feed Plot</u>									
Corn	8		0		4		12		12
								Fallow Ag. Land.	
								0	0

No. of Permittees: Agricultural Operations 23 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Crazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other				
				1. Total Refuge Acreage Under Cultivation				620
Hay - Wild	0			2. Acreage Cultivated as Service Operation				32

DIRECTIONS FOR PREPARING FORM NR--8
CULTIVATED CROPS - HAYING - GRAZING

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Cottonwood State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Wetland Retirement</u> <u>Small Grain/Legume</u>	2		0		0		2	2 Alfalfa-Cover	2
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 1 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	27*	15	90.00	72
				2. Other	0	0	0	0
<u>This includes all age classes</u>								
1. Total Refuge Acreage Under Cultivation								2
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Jackson State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./Tons	Unharvested Acres	Bu./Tons			
<u>Creoland Retirement</u> <u>Small Grain/Legume</u>	125		0		0		125	125 Alfalfa-Cover	125
<u>Food Plot Rotation</u> <u>Corn</u>	24		0		12		36		36
<u>Small Grain/Alfalfa</u>	36		0		0		36	36 Alfalfa-Cover	36
<u>Alfalfa</u>	0		0		0		0	36 Alfalfa-Cover	36
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 5 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	22*	90	\$180.00	144
				2. Other	0	0	0	0
* This includes all age classes.								
				1. Total Refuge Acreage Under Cultivation				233
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Kandiyohi State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./ Tons	Unharvested Acres	Bu. /Tons			
<u>Cropland Retirement</u>	89		0		0		89	89 Alfalfa-Cover	89
<u>Small Grain/Legume</u>									
<u>Native Grass and/or</u>	8		0		0		12	12 Native GrassCov.	12
<u>Small Grain</u>									
<u>Food Plot Rotation</u>									
<u>Corn</u>	30		0		15		45		45
<u>Small Grain/Alfalfa</u>	35		0		0		36	35 Alfalfa-Cover	36
<u>Alfalfa</u>	0		0		0			45 Alfalfa-Cover	45
<u>Food Plot</u>									
<u>Corn</u>	32		0		15		48		48
								Fallow Ag. Land.	
								0	0

No. of Permittees: Agricultural Operations 11 Haying Operations 0 Grazing Operations 3

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	18*	210	\$420.00	418
				2. Other	0	0	0	0
				*This includes all age classes.				
				1. Total Refuge Acreage Under Cultivation				275
Hay - Wild	0			2. Acreage Cultivated as Service Operation				12

DIRECTIONS FOR PREPARING FORM NR--8
CULTIVATED CROPS - HAYING - GRAZING

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758

Form M
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management DistrictCounty La Qui ParleState Minnesota

Cultivated Crops Grown	Permittee's		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Share Harvested		Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	98		0		0		98	98 Alfalfa-Cover	98
<u>Food Plot Rotation</u>									
Corn	6		0		3		9		9
Small Grain/Alfalfa	9		0		0		9	9 Alfalfa-Cover	9
Alfalfa	0		0		0		0	9 Alfalfa-Cover	9

No. of Permittees: Agricultural Operations 3 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other				
				1. Total Refuge Acreage Under Cultivation				125
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8:
CULTIVATED CROPS - HAYING - GRAZING

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form N
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Pope State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Cropland Retirement</u> <u>Small Grain/Legume</u>	110		0		0		110	110 Alfalfa-Cover	110
<u>Food Plot Rotation</u> <u>Corn</u>	24		0		12		36		36
<u>Small Grain/Alfalfa</u>	18		0		0		18	18 Alfalfa-Cover	18
<u>Alfalfa</u>	0		0		0		0	27 Alfalfa-Cover	27
<u>Food Plot</u> <u>Corn</u>	26*		0		0		26		26
								Fallow Ag. Land.	
								7	7
addres for fallowing 7 acres of Ag. Land.									

*Share for fallowing 7 acres of Ag. Land.

No. of Permittees: Agricultural Operations 10 Haying Operations 0 Grazing Operations 2

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	26*	125	\$250.00	207
				2. Other	0	0	0	0
				*This includes all age classes.				
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form N
(Rev. Jan. 1956)

ish and Wildli Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Denson Wetland Management District County Stearns State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./ Tons	Unharvested Acres	Bu. /Tons			
<u>Cropland Retirement</u> <u>Small Grain/Legume</u>	12		0		0		12	12 Alfalfa-Cover	12
<u>Food Plot Rotation</u> <u>Corn</u>	6		0		3		9	9 Alfalfa-Cover	9
<u>Small Grain/Alfalfa</u>	9		0		0		9	9 Alfalfa-Cover	9
<u>Alfalfa</u>	0		0		0		0		
<u>Food Plot</u> <u>Corn</u>	8		0		4		12		12
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 4 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				51
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form No. 1
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Stevens State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./Tons	Unharvested Acres	Bu./Tons			
<u>Cropland Retirement</u>									
Small Grain/Legume	141		0		0		141	141 Alfalfa-Cover	141
Native Grass and/or Small Grain	25		0		0		25	25 Native Grass Cover	25
<u>Feed Plot Rotation</u>									
Corn	18		0		9		27		27
Small Grain/Alfalfa	27		0		0		27	27 Alfalfa-Cover	27
Alfalfa	0		0		0		0	27 Alfalfa-Cover	27
<u>Feed Plot</u>									
Corn	12		0		6		18		18
								Fallow Ag. Land.	
								0	0

No. of Permittees: Agricultural Operations 14 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other				
				1. Total Refuge Acreage Under Cultivation				255
Hay - Wild	0			2. Acreage Cultivated as Service Operation				25

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758

Form No. 1

(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Swift State Minnesota

Cultivated Crops Grown	Permittee's		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Share	Harvested	Harvested		Unharvested				
			Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Cropland Retirement</u>									
<u>Small Grain/Legume</u>	96		0		0		96	96 Alfalfa-Cover	96
<u>Feed Plot Rotation</u>									
<u>Corn</u>	6		0		3		9		9
<u>Small Grain/Alfalfa</u>	9		0		0		9	9 Alfalfa-Cover	9
<u>Alfalfa</u>	0		0		0		0	9 Alfalfa-Cover	9
<u>Food Plot</u>									
<u>Corn</u>	16		0		8		24		24
								Fallow Ag. Land.	
								0	0

No. of Permittees: Agricultural Operations 9 Haying Operations 0 Grazing Operations 3

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	40*	180	\$350.00	395
				2. Other *This includes all age classes.	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				147
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Form N
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Ransom Wetland Management District County Traverse State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested Acres	Bu./Tons	Unharvested Acres	Bu./Tons			
<u>Food Plot Rotation</u>									
Corn	24		0		12		36		36
Small Grain/Alfalfa	36		0		0		36	36 Alfalfa-Cover	36
Alfalfa	0		0		0		0	36 Alfalfa-Cover	36
<u>Food Plot</u>									
Corn	4		0		2		6		6
								Fallow Ag. Land.	
								0	0

No. of Permittees: Agricultural Operations 5 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	0		2. Acreage Cultivated as Service Operation					0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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3-1758
Form NF
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Yellow Medicine State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./ Tons	Acres	Bu. /Tons			
<u>Creoland Retirement</u> <u>Small Grain/Legume</u>	11		0		0		11	11 Alfalfa-Cover	11
								Fallow Ag. Land.	
								0	

No. of Permittees: Agricultural Operations 2 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				11
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
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3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge

Benson Wetland Management District

Proposal Number

Reporting Year

1, 2, 3 & 4

1969

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount Payee or Cost Chemical Applied	Active Ingr. Application Rate	Carrier and Rate	Method of Application
(1)	(2)	Unit (3) County	(4)	(5)	(6)	(7)	(8)	(9)
7-29	Canada & Sow	Lind. Lake - B.S.	1	Tordon Beads	F.A. -15.00	2#/Acre	None	Hand
7-10	Canada	Barry Lake - B.S.	50	MCP	Marty - 87.50	3/4#/Acre	Water	Aerial
7-10	Canada	Boenke - B.S.	75	MCP	Marty - 131.25	3/4#/Acre	Water	Aerial
7-10	Canada	Karsky - B.S.	35	MCP	Marty - 61.25	3/4#/Acre	Water	Aerial
7-18	Canada	Olson - B.S.	28	MCP	Marty - 49.00	3/4#/Acre	Water	Aerial
7-10	Canada	Dismal - B.S.	325	MCP	Marty - 568.75	3/4#/Acre	Water	Aerial
7-18	Canada	Jorgenson - B.S.	45	MCP	Marty - 78.75	3/4#/Acre	Water	Aerial
7-10	Canada	Daly - B.S.	28	MCP	Marty - 49.00	3/4#/Acre	Water	Aerial
7-18	Canada	Artichoke - B.S.	55	MCP	Marty - 96.25	3/4#/Acre	Water	Aerial
7-10	Canada	Pankonin - C.	4	MCP	Deel - 8.80	3/4#/Acre	Water	Aerial
7-10	Canada	Bakalyar - C.	25	MCP	Deel - 55.00	3/4#/Acre	Water	Aerial
7-3	Canada	Ewert - C.	8	MCP	Frietag - 15.00	3/4#/Acre	Water	Ground
7-3	Canada & Sow	Ewert - C.	3	MCP	Pabst - 30.90	3/4#/Acre	Water	Ground
7-7	Canada & Unk. Th.	Schwarzenbach - J.	6	MCP	Deel - 13.20	3/4#/Acre	Water	Aerial
7-7	Canada	Wiebener - J.	42	MCP	Deel - 92.40	3/4#/Acre	Water	Aerial
7-7	Canada	Sangl - J.	12	MCP	Deel - 26.40	3/4#/Acre	Water	Aerial
7-7	Canada & Sow	Severson - J.	18	MCP	Deel - 39.60	3/4#/Acre	Water	Aerial
7-7	Canada & Sow	Stern - J.	65	MCP	Deel - 143.00	3/4#/Acre	Water	Aerial
7-7	Canada	Rasmussen - J.	8	MCP	Deel - 17.60	3/4#/Acre	Water	Aerial
7-7	Canada	Brooks - J.	8	2,4-D	Farmers C-Free	3/4#/Acre	Water	Ground
7-7	Canada & Sow	Ninnesman - J.	2	MCP	Ulbricht - Free	3/4#/Acre	Water	Ground

10. Summary of results (continue on reverse side, if necessary)

7-16	Canada	Quinn - K.	5	MCP	Munson - 12.25	3/4#/Acre	Water	Aerial
7-9	Canada	Quinn - K.	.5	MCP	F.A. - 4.00	3/4#/Acre	Water	Hand
7-16	Canada & Sow	DeGroot - K.	15	MCP	Munson - 36.75	3/4#/Acre	Water	Aerial
7-16	Canada	Reynolds - K.	1	MCP	Munson - 2.45	3/4#/Acre	Water	Aerial
7-16	Canada & Sow	Olson Lake - K.	60	MCP	Munson - 147.00	3/4#/Acre	Water	Aerial
7-9	Canada & Sow	Olson Lake - K.	1	MCP	F.A. - 8.00	3/4#/Acre	Water	Hand
7-16	Canada	Flann - K.	85	MCP	Munson - 208.25	3/4#/Acre	Water	Aerial
7-9	Canada	Flann - K.	1	MCP	F.A. - 4.00	3/4#/Acre	Water	Hand
7-16	Canada	Fischer - K.	62	MCP	Munson - 151.90	3/4#/Acre	Water	Aerial
7-9	Canada	Fischer - K.	1	MCP	F.A. - 8.00	3/4#/Acre	Water	Hand
7-16	Canada	Carley - K.	22	MCP	Munson - 53.90	3/4#/Acre	Water	Aerial

3-1979 (NR-12)
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Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PERSTICIDE APPLICATION

Refuge

Benson Wetland Management District

Proposal Number

Reporting Year

1, 2, 3 & 4

1969

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount Payable of Cost Chemical Applied	Active Ingr. Application Rate	Carrier and Rate	Method of Application
(1)	(2)	UNIT (3) COUNTY	(4)	(5)	(6)	(7)	(8)	(9)
7-16	Canada	Hodak - K.	27	MCP	Munson -66.15	3/4#/Acre	Water	Aerial
7-9	Canada	Hodak - K.	.5	MCP	F.A. - 8.00	3/4#/Acre	Water	Hand
7-7	Canada	Schueler - K.	3	MCP	Schueler 15.00	3/4#/Acre	Water	Ground
7-21	Canada	Jordan - P.	6	MCP	Marty - 10.50	3/4#/Acre	Water	Aerial
7-7	Canada	Jordan - P.	.3	MCP	F.A. - 4.00	3/4#/Acre	Water	Hand
7-21	Canada & Sow	Froland - P.	15	MCP	Marty - 26.25	3/4#/Acre	Water	Aerial
7-21	Canada & Sow	Brosh - P.	61	MCP	Marty -106.75	3/4#/Acre	Water	Aerial
7-21	Canada & Sow	Jackson - P.	8	MCP	Marty - 14.00	3/4#/Acre	Water	Aerial
6-6	Leafy Spurge	Elder - P.	1	MCP	F.A. - 12.00	3/4#/Acre	Water	Hand
6-6	Leafy Spurge	Heidebrink - P.	.1	MCP	F.A. - 2.00	3/4#/Acre	Water	Hand
7-7	Canada	Greiner - P.	.5	MCP	F.A. - 4.00	3/4#/Acre	Water	Hand
7-7	Canada	Bredberg - P.	.2	MCP	F.A. - 8.00	3/4#/Acre	Water	Hand
7-7	Canada	Mattson - P.	.1	MCP	Mattson- Free	3/4#/Acre	Water	Ground
7-14	Canada & Sow	Thone - P.	14	MCP	Nelson- 24.50	3/4#/Acre	Water	Ground
7-8	Canada & Bur.	Wehseler - SR.	1	MCP	F.A. - 22.50	3/4#/Acre	Water	Hand
7-7	Hoary All.	Costello - SR.	1	MCP	F.A. - 8.00	3/4#/Acre	Water	Hand
7-16	Canada & Sow	Kenna - SR.		MCP	Munson- 68.60	3/4#/Acre	Water	Aerial
7-8	Canada & Sow	Kenna - SR.	28	MCP	F.A. - 18.00	3/4#/Acre	Water	Hand
6-5	Leafy Spurge	Sherstad - SV.	.5	Tordon Beads	F.A. - 15.00	2#/Acre	None	Hand
7-7	Leafy Spurge	Greiner - SV.	5	Tordon Beads	F.A. - 91.00	2#/Acre	None	Hand
7-10	Canada	Joos - SV.	.5	Tordon Beads	F.A. - 10.00	2#/Acre	None	Hand
8-7	Canada & Sow	Joos - SV.	23	2,4-D	Flaten - 26.80	3/4#/Acre	Water	Ground

10. Summary of results (continue on reverse side, if necessary)

7-18	Canada	Grossman - SV.	68	MCP	Marty -119.00	3/4#/Acre	Water	Aerial
7-18	Canada	Harrison - SV.	90	MCP	Marty -157.50	3/4#/Acre	Water	Aerial
7-18	Canada	Anderson - SV.	20	MCP	Marty - 35.00	3/4#/Acre	Water	Aerial
7-18	Canada	Lamprecht - SV.	155	MCP	Marty -271.25	3/4#/Acre	Water	Aerial
7-18	Canada	McMahon - SV.	20	MCP	Marty - 35.00	3/4#/Acre	Water	Aerial
7-18	Canada	Freeman - SV.	38	MCP	Marty - 66.50	3/4#/Acre	Water	Aerial
7-18	Canada	Smith - SV.	20	MCP	Marty - 35.00	3/4#/Acre	Water	Aerial
7-18	Canada	Bahr - SV.	20	MCP	Marty - 35.00	3/4#/Acre	Water	Aerial
7-18	Canada	Kill - SV.	20	MCP	Marty - 35.00	3/4#/Acre	Water	Aerial

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(1)	(2)	UNIT (3) COUNTY	(4)	(5)	(6)	(7)	(8)	(9)
7-18	Canada	Solvie - SV.	38	MCP	Marty - 66.50	3/4#/Acre	Water	Aerial
7-18	Canada & Sow	Struck - SV.	48	MCP	Marty - 84.00	3/4#/Acre	Water	Aerial
7-18	Canada & Sow	Edwards - SV.	18	MCP	Marty - 31.50	3/4#/Acre	Water	Aerial
6-10	Leafy Spurge	Lynch L. - SW.	.5	Tordon Beads	F.A. - 15.00	2#/Acre	None	Hand
7-18	Canada	Lynch L. - SW.	40	MCP	Marty - 70.00	3/4#/Acre	Water	Aerial
7-11	Canada	Westhausen - SW.	1	MCP	F.A. - 10.00	3/4#/Acre	Water	Hand
2-28	Cattail	Compton - SW.	.23	Ded-Weed-LV 20	F.A. - 30.00	5#/1000 Sq.ft.	None	Hand
7-18	Canada	O'Neill - T.	85	MCP	Marty - 148.75	3/4#/Acre	Water	Aerial

10. Summary of results (continue on reverse side, if necessary)